

Appl. No. 09/560,673
Amdt. dated 07/16/2004
Reply to Office Action of 04/16/2004

REMARKS

This Amendment is in response to the Final Office Action mailed 4/16/2003. Applicant has filed a Request for Continued Examination to have the Office withdraw the finality of the Office Action and have this submission entered and considered. In the Office Action, the Examiner rejected claims 1-11, 13, 14, 23-31, and 37 under 35 U.S.C. § 103, and indicated allowable subject matter in claims 12, 15-22, 32, and 33-36. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 103

5. The Examiner rejects claims 1-11, 13, 14, 23-31, and 37 under 35 U.S.C. § 103(a) as being unpatentable over Szczepanek et al. (US 6,621,818).

Regarding claims 1, 29, and 37, applicant has amended claims 1 and 29, and cancelled claim 37.

Claim 1 is amended to make clear that the crossbar switch fabric transfers packets between the shared-memory switch fabrics and the network connections. Szczepanek clearly shows the elements 20₁-20₁₆ that the Examiner considers to be shared-memory switch fabrics transfer packets between the crossbar switch fabric 100 and the network connections which is distinctly different from what is now claimed. Claim 1 as amended is further distinguished from the teachings of Szczepanek because the crossbar switch fabric is claimed as including a plurality of ports for receiving packets from and transmitting packets to network connections. The crossbar switch fabric of Szczepanek does not provide ports for network connections. The Examiner admits that Szczepanek does not disclose a second crossbar switch fabric as claimed.

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The Examiner argues that it is generally considered to be within the ordinary skill in the art to duplicate parts for a multiplied effect. Claim 1 is amended to provide that each of the channels is coupled to one of the shared-memory switch fabrics such that each crossbar switch fabric is coupled to every shared-memory switch fabric. Thus the crossbar switch fabrics are not merely duplicated for a multiplied effect but are cross connected to provide a structure with greater capabilities than the sum of its parts. Claim 1 is amended to provide that each crossbar switch fabric is configured to couple any one of the ports to any one of the channels to distribute packets from one of the network connections to any one of the shared-memory switch fabrics and to re-collect packets from any one of the shared-memory switch fabrics to one of the network connections. As seen in Figure 14 the crossbar switch fabric taught by Szczepanek couples one group of switches to a different group of switches which does not teach or suggest coupling the ports to the channels as claimed.

Claim 29 is amended to make clear that the crossbar switch fabric includes a plurality of ports to receive transfers packets from network connections. Claim 29 is further amended to make clear that it is the crossbar switch fabric that distributes the packets from the network connections to the shared-memory switch fabrics. Szczepanek clearly shows the elements 20₁-20₁₆ that the Examiner considers to be shared-memory switch fabrics transfer packets between the network connections and the crossbar switch fabric 100 which is distinctly different from what is now claimed.

Claim 2 has been amended to include that at least one channel of each shared-memory switch fabric is coupled to one of the channels of each crossbar switch fabric. Since Szczepanek shows only one crossbar switch fabric, Szczepanek cannot teach or suggest this claimed element.

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Regarding claims 3 and 28, the claims are cancelled.

Regarding claims 4-10, 25, and 26, claims 4, 6, and 7 are amended and claims 25 and 26 are cancelled. Claim 4 has been amended to provide that each crossbar switch fabric includes a number of channels that is an integer multiple of a total number of shared-memory switch, the integer multiple being at least a factor of two. Szczepanek shows a crossbar switch fabric 100 having only one channel for each of the elements 20₁-20₁₆ that the Examiner considers to be shared-memory switch fabrics. Claims 6 and 7 are amended to improve the clarity of the claims and for consistency with amendments in the claims from which they depend.

Regarding claim 11, the claim has been amended to make clear that the port controller provides packets to the plurality of ports of the crossbar switch fabric. Szczepanek shows a port controller (MAC 46 in FIG. 4a) that provides packets to a single point P₈ of the crossbar switch fabric 100 in FIG. 14.

Regarding claims 13, 14, 27, and 31, claims 13 and 31 have been amended, and claim 27 has been cancelled. Claims 13 and 31 have been amended to make clear that packets are distributed from one of the plurality of ports of the crossbar switch fabrics to more than one of the shared-memory switch fabrics without reference to the final port destination of the packets. Szczepanek shows the elements 20₁-20₁₆ that the Examiner considers to be shared-memory switch fabrics which receive packets only from or for the connected network ports (ports 0-7 in FIG. 4a).

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Regarding claim 23, Applicants rely on the patentability of the claims from which this claim depends to traverse the rejection without prejudice to any further basis for patentability of this claim based on the additional limitations recited.

Regarding claim 24, Applicants rely on the patentability of the claims from which this claim depends to traverse the rejection without prejudice to any further basis for patentability of this claim based on the additional limitations recited.

Regarding claim 30, Applicants rely on the patentability of the claims from which this claim depends to traverse the rejection without prejudice to any further basis for patentability of this claim based on the additional limitations recited.

Applicants respectfully request that the Examiner withdraw the rejection of claims 1-11, 13, 14, 23-31, and 37 under 35 U.S.C. § 103(a) as being unpatentable over Szczepanek.

Allowable Subject Matter

7. Applicant notes with appreciation the Examiner's indication of allowable subject matter. The Examiner objects to claims 12, 15-22, 32, and 33-36 as being dependent on a rejected base claim, but indicates that the claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In view of applicants' remarks above, applicant respectfully submits that the base claims from which these claims depend are allowable and applicant has not rewritten these claims in independent form.

Newly presented claim 38 includes most of the elements of claim 12, the base claim and any intervening claims. The element of a shared buffer memory that appeared in intervening

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claim 11 has been omitted from claim 38. Applicant respectfully submits that the element of a shared buffer memory is not required for patentability of claim 38.

Newly presented claim 47 includes the elements of claim 32, the base claim and any intervening claims.

Newly presented claim 54 includes the elements of claim 36, the base claim and any intervening claims.

Conclusion

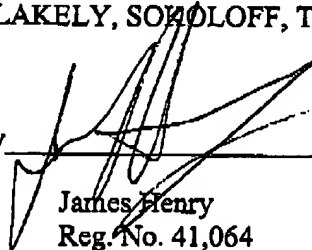
Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOLOLOFF, TAYLOR & ZAFMAN LLP

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By


James Henry
Reg. No. 41,064
Tel.: (714) 557-3800 (Pacific Coast)